

10/676296
Applicant Copy

34 P24009 rattus norv
35 P56114 helicobacte
36 Q10283 schizosacch
37 Q25243 bacterioph
38 Q8795 methanopyru
39 Q33400 saccharonyc
40 Q08493 homo sapien
41 P14376 escherichia
42 P97793 mus musculu
43 Q10187 schizosacch
44 P33233 escherichia
45 Q7767 haemophilus

ALIGNMENTS

RESULT 1
ARR1 ECOLI
ID ARR1 ECOLI STANDARD; PRT; 117 AA.
AC P15905;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE Arsenical resistance operon repressor.
GN ARSR.
OS Escherichia coli.
OG Plasmid R773.
OC Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=90174986; PubMed=2408017;
RA San Francisco M.J.D., Hope C.L., Owolabi J.B., Tisa L.S., Rosen B.P.;
RT "Identification of the metalloregulatory element of the
RT plasmid-encoded arsenical resistance operon."
RL Nucleic Acids Res. 18:619-624 (1990).
RN [2]
RP FUNCTION.
RX MEDLINE=92157859; PubMed=1838573;
RA Wu J., Rosen B.P.;
RT "The Arsr protein is a trans-acting regulatory protein."
RL Mol. Microbiol. 5:1331-1336 (1991).
RN [3]
RP METAL-REGULATION.
RX MEDLINE=93107054; PubMed=8416957;
RA Wu J., Rosen B.P.;
RT "Metalloregulated expression of the ars operon."
RL J. Biol. Chem. 268:52-58 (1993).
CC -!- FUNCTION: TRANSCRIPTIONAL REPRESSOR FOR THE ARS OPERON. ARSR IS
CC A TRANS-ACTING REGULATORY PROTEIN WHICH CONTROLS ITS OWN
CC EXPRESSION. THE REPRESSIVE EFFECT OF ARSR IS ALLEVIATED BY OXYIONS
CC OF +III OXIDATION STATE OF ARSENIC, ANTIMONY, AND BISMUTH, AS WELL
CC AS ARSENATE (AS(V)).
CC -!- SUBUNIT: Binds DNA as a homodimer.
CC -!- SIMILARITY: BELONGS TO THE ARSR FAMILY OF TRANSCRIPTIONAL
CC REGULATORS.
CC
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CC
CC EMBL; X16045; CRA34168.1; -
CC PIR; J50448; BVCEAR.
CC HSP; P30340; 1SMT.
CC InterPro; IPR001845; HTH_ArsR.
CC Pfam; PF01022; HTH_5; 1.
CC PRINTS; PR00778; HTHARSR.
CC
CC SMART; SM00418; HTH_ArsR; 1.
CC PROSITE; PS00946; HTH_ArsR_FAMILY; 1.
CC Plasmid; Arsenical resistance; Transcription regulation; Repressor;
CC DNA-binding
CC DNA BIND 33 52 H-T-H MOTIF (POTENTIAL).
CC SEQUENCE 117 AA; 12999 MW; 4E2D132F1P011AF6 CRC64;
CC
CC Query Match 88.3%; Score 447; DB 1; Length 117;
CC Best Local Similarity 87.6%; Pred. No. 5.7e-42;
CC Matches 85; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

SMART; SM00418; HTH_ArsR; 1.
PROSITE; PS00846; HTH_ArsR_FAMILY; 1.
Plasmid; Arsenical resistance; Transcription regulation; Repressor;
DNA-binding.
FT DNA BIND 33 52 H-T-H MOTIF (POTENTIAL).
SQ SEQUENCE 117 AA; 13198 MW; 1F0D10766E4FD886 CRC64;
Query Match 100.0%; Score 506; DB 1; Length 117;
Best Local Similarity 100.0%; Pred. No. 2e-48;
Matches 97; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MQLTPLQLFKNLSDETRIGVILLREMGELCVCLCMALDOSQPKISHLAMLRSGIL 60
Db 1 MQLTPLQLFKNLSDETRIGVILLREMGELCVCLCMALDOSQPKISHLAMLRSGIL 60
Qy 61 LDRKQKWHYELSPHISWRAQIIQAWLSQDDVQ 97
Db 61 LDRKQKWHYELSPHISWRAQIIQAWLSQDDVQ 97

RESULT 2
ARR2 ECOLI
ID ARR2 ECOLI STANDARD; PRT; 117 AA.
AC P52144;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 15-DEC-1998 (Rel. 37, Last annotation update)
DE Arsenical resistance operon repressor.
GN ARSR.
OS Escherichia coli.
OG Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC Enterobacteriaceae; Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=96275894; PubMed=8674982;
RA Bruhn D.F., Li J., Silver S., Roberto F., Rosen B.P.;
RT "The arsenical resistance operon of IncN plasmid R46."
RL FEMS Microbiol. Lett. 139:149-153 (1996).
RN [2]
RP FUNCTION: TRANSCRIPTIONAL REPRESSOR FOR THE ARS OPERON. ARSR IS
RP A TRANS-ACTING REGULATORY PROTEIN WHICH CONTROLS ITS OWN
RP EXPRESSION. THE REPRESSIVE EFFECT OF ARSR IS ALLEVIATED BY OXYIONS
RP OF +III OXIDATION STATE OF ARSENIC, ANTIMONY, AND BISMUTH, AS WELL
RP AS ARSENATE (AS(V)).
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RP -!- SIMILARITY: BELONGS TO THE ARSR FAMILY OF TRANSCRIPTIONAL
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RP
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RP or send an email to license@isb-sib.ch).
RP
RP EMBL; U38947; AAB09624.1; -
RP HSP; P30340; 1SMT.
RP InterPro; IPR001845; HTH_ArsR.
RP Pfam; PF01022; HTH_5; 1.
RP PRINTS; PR00778; HTHARSR.
RP
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unf nf